middle of the book, an impressive number of figures are presented in the longest chapter on 'circadian and infradian rhythms'. The research results presented all through the book were essentially carried out on the members of the genus *Euglena,* and especially *Euglena gracilis*, which are among the most widely used and researched eucaryotic microorganisms in biology. This is the result, of course, of the unique taxonomic position held by this genus which shows both animal-like and plant-like characteristics.

I understand that a fourth volume of this series is planned to be published. It will cover 'Subcellular Organelles and Molecular Biology'. As more research time has been devoted to the chloroplasts of *Euglena gracilis* than to any other component of the *Euglena* cell, several chapters of volume IV will review chloroplast structure, development, chemistry and metabolism, and another one will present the most recent information on mitochondrial morphology, ultrastructure, isolation, physiology and function.

Finally I can recommend warmly this book to all the Euglenophiles, because it is the only series available on *Euglena* research and because the standards are high. We expect to see soon the next volume!

D. Affolter

Unusual Micro-organisms – Gram-negative Fastidious Species

Edited by Edward J. Bottone

Marcell Dekker, New York and Basel, 1983
136 pages. Sw.Fr. 79.00

This book contains six essays on an assortment of bacteria. They vary considerably in size. There is one essay of 44 pages on *Eikenella corrodens* with 13 illustrations and 75 references, 20 pages of *Capnocytophaga* and 6–12 text pages each on *Gardnerella, Cardiobacterium, Pasteurella multocida* and *Actinobacillus actinomycetemcomitans*. It is difficult to justify the claim that the book contains 'intensive investigations concerning the microbiological, clinical and epidemiological correlates of these micro-organisms'. One could not do all that in six small pages. Most of the chapters deal superficially with the organism and disease in a way that will not satisfy microbiologists, clinicians or epidemiologists. The authors are all from the USA and the references are mainly from American sources. The book may have been a long time in preparation as almost all the references are prior to 1980. In one chapter 32 of the 43 references refer to work published prior to 1969 (12 prior to the Second World War).

The first chapter is the largest and most rambling. Under the subheading 'DNA homology studies' no DNA homology data are given and a paragraph on toxin production concludes that no toxins are produced. It would have been useful to include data on cell wall composition, lipids and metabolism, if a new perspective is to be presented. *Capnocytophaga* is neither 'unusual' nor 'fastidious'. If it was included at all they might have referred to the work of the Japanese, e.g. Miyagowa et al., or British, e.g. Collins et al. and Holbrook et al. in this field. I cannot understand the arithmetic in Table 3, p.54 which gives the biochemical reactions of six strains of *C. sputigena;* e.g. 25% produce acid from amygdalin, i.e. 1.5 strains, and 60% from dextran, i.e. 3.6 strains. There is considerable debate as to whether or not it is possible to clearly differentiate subspecies of *Capnocytophaga* at all.

The chapter on *Actinobacillus* is concise but the excellent review by Killian et al. is not mentioned. Some British sources are quoted here notably the first edition of Topley and Wilson (1929) and Leonard Colebrook's (spelt Colbrook unfortunately) 1920 description of the organism.

The price inside the copy sent for review was 79.00 Swiss Francs which is expensive for 122 text pages. The binding of the book is first class.

J.D. Williams